

What is Claimed is:

1. A method of synchronizing transfer of frame tags to a switch fabric with the transfer of data frames to a buffer memory, the method comprising:
- receiving, at a network switch port, at least a portion of a data frame including layer 3 information,
- generating a tag result corresponding to at least a portion of the data frame; and
- synchronizing transfer of the tag result to a switch fabric with transfer of at least a portion of the data frame to a buffer memory based on a signal indicating a status of the transfer of the portion of the data frame to the buffer memory.
2. The method of claim 1, further comprising storing the portion of the data frame in the buffer memory.
3. The method of claim 2, wherein the step of generating a tag result includes generating a first tag result by the network switch port, and synchronizing transfer of the first tag result is based on a signal from the queuing device indicating a start of frame.
4. The method of claim 2, wherein the step of generating a tag result includes generating a final tag result by the network switch port, and synchronizing transfer of the final tag result is based on a signal from the queuing device indicating an end of frame.
5. The method of claim 4, further comprising storing the first and final tag result in memory prior to transfer to the switch fabric.
6. The method of claim 3, further comprising generating a preserving signal to preserve a signal indicating that the first tag result is valid, and to reset the preserving signal when the first tag result is transferred to the switch fabric.
7. The method of claim 4, further comprising generating a preserving signal in response to a determination that the final tag result is valid, and resetting the preserving signal when the final tag result is transferred to the switch fabric.
8. A network switch comprising:

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a switch port having a port filter configured to receive at least a portion of a data frame including layer 3 information and to generate a tag result,

a queue block configured for transferring the data frame from the switch port to a buffer memory,

a switch fabric configured for receiving the tag result and for performing a frame forwarding switching decision based on the tag result and monitoring of the transfer of the data frame, and

a synchronizing device configured to synchronize the transfer of the tag result to the switch fabric with the transfer of the at least a portion of the data frame to the buffer memory based on a signal from the queue indicating a status of the transfer of the portion of the data frame to the buffer memory.

8. The network switch of claim 7, wherein the synchronizing device is configured to receive a first tag result and to transfer the first tag result to the switch fabric based on a start of frame signal from the queue block.

9. The network switch of claim 7, wherein the synchronizing device is configured to receive a final tag result and to transfer the final tag result to the switch fabric based on an end of frame signal from the queue block.

10. The network switch of claim 7, wherein the synchronizing device includes memory configured for storing the tag result.

11. The network switch of claim 7, wherein the synchronizing device is configured to generate a preserving signal to preserve a signal from the port filter indicating that the tag result is valid and to reset the preserving signal when the tag result is transferred to the switch fabric.

12. The network switch of claim 7, wherein the synchronizing device includes a state machine configured to control transferring the tag result to the switch fabric.

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